

### **Abstract of the Disclosure**

A composition and method for enhancing the thermal conductivity in heat transfer systems. The composition comprises a powder having average particle sizes in the nanometer to micron size range, a coating for imparting corrosion resistance and/or acting as a dispersant, and a heat transfer medium. The heat transfer medium is selected from the group of interpolymers, polymers, gaseous and liquid fluids, and phase change materials. Suitable powders include metals and metal oxides, alloys or blends thereof, and carbon derivatives. The surface of the powder is modified by surface complexes or physical adsorption with a coating compound. The coated powder, when mixed with a heat transfer medium, forms a colloidal dispersion which exhibits enhanced heat transfer capacity and thermal conductivity, stable chemical composition, faster heat transfer rates, and dispersion maintenance which are beneficial to most heat transfer systems.